

## 1. What are the differences between operators and values in the following?

Operator are symbols like (\*, +, /, etc.,) which are used to perform operations on the given values or variables. Operators can also be logical operators like "and" "or" , relational operators like <, >, ==

Values are nothing but constants or variables on which different kinds of operations(arithmetic, logical etc.,) can be performed.

\* → Its an operator

'Hello' → Value

-87.8 → Value

- → Operator

/ → Operator

+ → Operator

6 → Value

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## 2. What is the difference between string and variable?

Spam → Variable (Variable is nothing but whose value can be changed as per our requirements and use cases in a program)

'Spam' → String (String is a collection of group of characters enclosed within single quotes or double quotes)

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## 3. Describe three different data forms.

Int (Integer) : An integer is nothing but a whole number including positive values, negative values and zero. Eg: -55, 10000, -1

String : It is a collection of characters or group of words enclosed within single or double quotes eg: 'This is my first assignment', "Jaanvi"

Float : It is a fraction or decimal point value . eg: 55.5, 100.0, -36.5

Boolean : It is a data type which evaluates the given expression and gives the result as either true or false depending on the conditions.

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## 4. What makes up an expression? What are the functions of all expressions?

Combination of values and operators makes up an expression. They can be arithmetical expressions or logical expressions. Eg: (55/5)\*66.7, a == b, a and b, a or b or c

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## 5. In this chapter, assignment statements such as spam = 10 were added. What's the difference between a declaration and an expression?

Declaration : Assigning a value to a variable or a constant

Eg : spam = 200 or a ="Jaanvi"

Expression : Is a combination of values and operators

Eg :  $4+5*6$  or  $(8+9)/(67-55)$

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**6. After running the following code, what does the variable bacon contain?**

```
bacon = 22
```

```
bacon + 1
```

bacon value will still remain the same. In the above code we are just incrementing the value but we are not assigning the incremented value to bacon, so bacon value will still be same .

```
bacon = 22
```

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**7. What should the values of the following two terms be?**

```
'spam' + 'spamspam' → output : 'spamspamspam'
```

```
'spam' * 3 → output : 'spamspamspam'
```

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**8. Why is it that eggs is a true variable name but 100 is not?**

Variable names should start with an alphabet but not with an integer. As 'eggs' variable starts with an alphabet it is considered as a true variable name whereas 100 starts with an integer "1" so 100 is not a variable

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**9. Which of the following three functions may be used to convert a value to an integer, a floating-point number, or a string?**

`int()` → this function is used to convert the given value into an integer

`float()` → this function is used to convert the given value into a floating point value

`str()` → this function is used to convert the given value into a string

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**10. What is the error caused by this expression? What would you do about it?**

```
'I have eaten ' + 99 + ' burritos.'
```

In the above expression we are concatenating strings('I have eaten ', 'burritos') and integer (99) which is not possible.

In order for the above expression to get executed we need to enclose 99 within quotes and make it as a string.

```
'I have eaten'+ '99'+ 'burritos'
```

o/p: 'I have eaten99burritos'